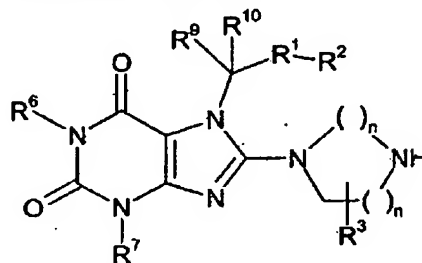


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This listing of claims will replace all prior versions and listings of claims in the application.

# CLAIM LISTING

## 1. (Currently amended) A compound of formula I



I

wherein

each n is one or two independently

R<sup>1</sup> is C=O; C=S; C<sub>1</sub>-C<sub>2</sub> alkylene optionally substituted with one or more R<sup>4</sup> independently; C<sub>2</sub> alkenylene substituted with one or more R<sup>4</sup> independently; C<sub>2</sub> alkynylene; C<sub>3</sub>-C<sub>7</sub> cycloalkylene optionally substituted with one or more R<sup>4</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloheteroalkylene optionally substituted with one or more R<sup>4</sup> independently; arylene optionally substituted with one or more R<sup>4</sup> independently; aryl C<sub>1</sub>-C<sub>3</sub> alkylene optionally substituted with one or more R<sup>4</sup> independently; heteroarylene optionally substituted with one or more R<sup>4</sup> independently; heteroaryl C<sub>1</sub>-C<sub>3</sub> alkylene optionally substituted with one or more R<sup>4</sup> independently; perhalo C<sub>1</sub>-C<sub>10</sub> alkylene; perhalo C<sub>1</sub>-C<sub>10</sub> alkyloxyene;

R<sup>2</sup> is H; C<sub>1</sub>-C<sub>7</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>2</sub>-C<sub>7</sub> alkenyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>2</sub>-C<sub>7</sub> alkynyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloheteroalkyl optionally substituted with one or more R<sup>4</sup> independently; aryl optionally substituted with one or more R<sup>4</sup> independently; aryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; heteroaryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; heteroaryl optionally substituted

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with one or more  $R^4$  independently, -SH; -SR<sup>5</sup>; SOR<sup>5</sup>; SO<sub>2</sub>R<sup>5</sup>; -CHO; -CH(OR<sup>5</sup>)<sub>2</sub>; carboxy; -CO<sub>2</sub>R<sup>4</sup>; NHCONNH<sub>2</sub>; -NHCSNH<sub>2</sub>; -NHCONH<sub>2</sub>; -NHCOR<sup>4</sup>; -NH<sub>2</sub>SO<sub>2</sub>R<sup>5</sup>; -O-CO-(C<sub>1</sub>-C<sub>5</sub>) alkyl optionally substituted with one or more  $R^4$  independently; cyano; nitro; halogen; hydroxy; perhalo C<sub>1</sub>-C<sub>7</sub> alkyl; perhalo C<sub>1</sub>-C<sub>7</sub> alkyloxy; -SO<sub>2</sub>NH<sub>2</sub>; -SO<sub>2</sub>NH(R<sup>5</sup>); -SO<sub>2</sub>(R<sup>5</sup>)<sub>2</sub>; -CONH<sub>2</sub>; -CSNH<sub>2</sub>; -CON<sub>2</sub>H<sub>3</sub>; -CONH(R<sup>5</sup>); -CON(R<sup>5</sup>)<sub>2</sub>; C<sub>1</sub>-C<sub>10</sub> alkyloxy optionally substituted with  $R^4$  independently; C<sub>2</sub>-C<sub>10</sub> alkenyloxy optionally substituted with  $R^4$ ; C<sub>2</sub>-C<sub>10</sub> alkynyloxy optionally substituted with  $R^4$  independently, aryloxy optionally substituted with  $R^4$  independently; heteroaryloxy optionally substituted with  $R^4$  independently;

$R^3$  is H; C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with one or more  $R^4$  independently; C<sub>2</sub>-C<sub>10</sub> alkenyl optionally substituted with one or more  $R^4$  independently; C<sub>2</sub>-C<sub>10</sub> alkynyl optionally substituted with one or more  $R^4$  independently; C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with one or more  $R^4$  independently; C<sub>3</sub>-C<sub>7</sub> cycloheteroalkyl optionally substituted with one or more  $R^4$  independently; aryl optionally substituted with one or more  $R^4$  independently; aryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more  $R^4$  independently; heteroaryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more  $R^4$  independently; heteroaryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-NH(CH<sub>2</sub>)<sub>1-4</sub>NH-aryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-NH(CH<sub>2</sub>)<sub>1-4</sub>NH-heteroaryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>NH-aryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>NH-heteroaryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>O-aryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>O-heteroaryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1-4</sub>NH-aryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1-4</sub>NH-heteroaryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1-4</sub>S-aryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1-4</sub>S-heteroaryl optionally substituted with one or more  $R^4$  independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O-C<sub>1</sub>-C<sub>3</sub>alkyl optionally substituted with one or more  $R^4$ ; -NHCOR<sup>4</sup>; -NH<sub>2</sub>SO<sub>2</sub>R<sup>5</sup>; -O-CO-(C<sub>1</sub>-C<sub>5</sub>) alkyl optionally substituted with one or more  $R^4$  independently; -SH; -SR<sup>5</sup>; -SOR<sup>5</sup>; -SO<sub>2</sub>R<sup>5</sup>; -CHO; -CH(OR<sup>5</sup>)<sub>2</sub>; carboxy; cyano; nitro; halogen; hydroxy; -SO<sub>2</sub>NH<sub>2</sub>; -SO<sub>2</sub>NH(R<sup>5</sup>);

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$-\text{SO}_2\text{N}(\text{R}^5)_2$ ;  $-\text{CONH}_2$ ;  $-\text{CONH}(\text{R}^5)$ ;  $-\text{CON}(\text{R}^5)_2$ ;  $-\text{CSNH}_2$ ;  $-\text{CONHNH}_2$ ;  $-\text{CO}_2\text{R}^4$ ;  $-\text{NHCNHNH}_2$ ;  $-\text{NHCSNH}_2$ ;  $-\text{NHCONH}_2$ ;

$\text{R}^4$  is  $\text{C}_1$ - $\text{C}_{10}$  alkyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_2$ - $\text{C}_{10}$  alkenyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_2$ - $\text{C}_{10}$  alkynyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_3$ - $\text{C}_7$  cycloalkyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_3$ - $\text{C}_7$  cycloheteroalkyl optionally substituted with one or more  $\text{R}^8$  independently; aryl optionally substituted with one or more  $\text{R}^8$  independently; heteroaryl optionally substituted with one or more  $\text{R}^8$  independently; amino; amino substituted with one or more  $\text{C}_1$ - $\text{C}_{10}$  alkyl optionally substituted with one or more  $\text{R}^8$ ; amino substituted with one or two aryl optionally substituted with one or more  $\text{R}^8$  independently; heteroaryl optionally substituted with one or more  $\text{R}^8$  independently;  $=\text{O}$ ;  $=\text{S}$ ;  $-\text{CO}-\text{R}^5$ ;  $-\text{COOR}^5$ ;  $-\text{O}-\text{CO}-(\text{C}_1-\text{C}_5)$  alkyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{NH}(\text{CH}_2)_{1-4}\text{NH-aryl}$ ;  $\text{NH}(\text{CH}_2)_{1-4}\text{NH-heteroaryl}$ ;  $-\text{NHCOR}^5$ ;  $-\text{SOR}^5$ ;  $\text{SO}_2\text{R}^5$ ; carboxy; cyano; N-hydroxyimino; nitro; halogen; hydroxy; perhalo  $\text{C}_1$ - $\text{C}_{10}$  alkyl; perhalo  $\text{C}_1$ - $\text{C}_{10}$  alkyloxy;  $-\text{SH}$ ;  $-\text{SR}^5$ ;  $-\text{SO}_3\text{H}$ ;  $-\text{SO}_3\text{R}^5$ ;  $-\text{SO}_2\text{R}^5$ ;  $-\text{SO}_2\text{NH}_2$ ;  $-\text{SO}_2\text{NH}(\text{R}^5)$ ;  $-\text{SO}_2\text{N}(\text{R}^5)_2$ ;  $-\text{CONH}_2$ ;  $-\text{CONH}(\text{R}^5)$ ;  $-\text{CON}(\text{R}^5)_2$ ;  $\text{C}_1$ - $\text{C}_{10}$  alkyloxy optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_2$ - $\text{C}_{10}$  alkenyloxy optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_2$ - $\text{C}_{10}$  alkynyloxy optionally substituted with one or more  $\text{R}^8$  independently; aryloxy optionally substituted with one or more  $\text{R}^8$  independently; heteroaryloxy optionally substituted with one or more  $\text{R}^8$  independently; and when two  $\text{R}^4$  are attached to the same carbon atom, they, together with the carbon atom, may form a spiroheterocyclic system selected from hydantoin; thiohydantoin; and oxazolidine-2,5-dione;

$\text{R}^5$  is  $\text{C}_1$ - $\text{C}_{10}$  alkyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_2$ - $\text{C}_{10}$  alkenyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_2$ - $\text{C}_{10}$  alkynyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_3$ - $\text{C}_7$  cycloalkyl optionally substituted with one or more  $\text{R}^8$  independently;  $\text{C}_3$ - $\text{C}_7$  cycloheteroalkyl optionally substituted with one or more  $\text{R}^8$  independently; aryl optionally substituted with one or more  $\text{R}^8$  independently; aryl  $\text{C}_1$ - $\text{C}_5$  alkyl optionally substituted with one or more  $\text{R}^8$  independently; heteroaryl optionally

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substituted with one or more  $R^8$  independently; heteroaryl  $C_1$ - $C_5$  alkyl optionally substituted with one or more  $R^8$  independently;

$R^6$  is H;  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkenyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkynyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloalkyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^4$  independently; aryl optionally substituted with one or more  $R^4$  independently; heteroaryl optionally substituted with one or more  $R^4$  independently;

$R^7$  is H;  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkenyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkynyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloalkyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^4$  independently; aryl optionally substituted with one or more  $R^4$  independently; heteroaryl optionally substituted with one or more  $R^4$  independently;

$R^8$  is H, amidoxime; nitro, tetrazole; pentafluorophenyl;  $-CH_2OH$ ;  $-CHO$ ;  $-COCH_3$ ;  $-CF_3$ ;  $-CCl_3$ ;  $-OCF_3$ ;  $-OCH_3$ ;  $-CN$ ;  $-CO_2CH_3$ ;  $-CONH_2$ ;  $-CSNH_2$ ;  $-CON_2H_3$ ;  $-SO_3H$ ;  $-SO_2NH_2$ ;  $-SO_2NHCH_3$ ;  $-SO_2N(CH_3)_2$ ;  $-SO_2$  (1-piperazinyl);  $-SO_2$  (4-methylpiperazin-1-yl);  $-SO_2$  (pyrrolidin-1-yl);  $-SO_2$  (piperidin-1-yl);  $-SO_2$  (morpholin-4-yl); N-hydroxyimino;  $-NH_2$ ;  $-NHCH_3$ ;  $-N(CH_3)_2$ ;  $-NHCNHNH_2$ ;  $-NHCNHNHCH_3$ ;  $-NHCSNH_2$ ;  $-NHCSNHCH_3$ ;  $-NHCONH_2$ ;  $-NHCONHCH_3$ ;  $-NHCOCH_3$ ;  $-NHCO_2CH_3$ ; piperazinyl; morpholin-4-yl; thiomorpholin-4-yl; pyrrolidin-1-yl; piperidin-1-yl; halogen;  $-OH$ ;  $-SH$ ;  $-SCH_3$ ;  $-aminoacetyl$ ;  $-OPO_3H_2$ ;  $OPO(OH)(OCH_3)$ ;  $-PO_3H_2$ ;  $-PO(OCH_3)_2$ ;  $PO(OH)(OCH_3)$ ;

$R^9$  is H; halogen;  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^4$  independently

$R^{10}$  is H; halogen;

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or, R<sup>9</sup> and R<sup>10</sup>, together with the carbon atom to which they are attached, may be connected to form a cyclopropyl ring;

or a salt thereof with a pharmaceutically acceptable acid or base;

with the exception of the following compounds:

7-(3-Chloro-propyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione;  
7-(3-Amino-propyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione;  
3-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydro-purin-7-yl)-propionaldehyde;  
1,3-dimethyl-7-(2-oxo-propyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
1,3,1',3',7'-pentamethyl-8-piperazin-1-yl-3,7,3',7'-tetrahydro-7,8'-methanediyl-bis-purine-2,6-dione,  
7-[2-Hydroxy-3-(4-methoxy-phenoxy)-propyl]-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-[2-hydroxy-2-(4-nitro-phenyl)-ethyl]-3-methyl-8-piperazin-1-yl-3,7,8,9-tetrahydro-purine-2,6-dione,  
7-Benzyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-(4-Chloro-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-(2-Chloro-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-Ethyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3-Methyl-8-piperazin-1-yl-1,7-dipropyl-3,7-dihydro-purine-2,6-dione,  
3-Methyl-7-(3-methyl-butyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-Butyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3-Methyl-7-(3-phenyl-propyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-But-2-enyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-(3-Chloro-but-2-enyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-Heptyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3-Methyl-7-(1-phenyl-ethyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3-Methyl-7-(3-methyl-benzyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3-Methyl-7-propyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and  
3-Methyl-7-pentyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.

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2. (Original) A pharmaceutical composition comprising at least one compound according to claim 1 together with a pharmaceutically acceptable carrier or diluent.

3. (Previously presented) A compound according to claim 1 selected from the following:

7-Benzyl-8-(6-hydroxymethyl-[1,4]diazepan-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,  
7-Benzyl-8-(6-hydroxy-[1,4]diazepan-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,  
7-Benzyl-8-(3-hydroxymethyl-[1,4]diazepan-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,  
7-Benzyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
1,3-Dimethyl-7-(4-methylbenzyl) -8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
3-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzonitrile,  
2-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzonitrile,  
1,3-Dimethyl-7-(1-phenylethyl) -8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
7-(2-Iodobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
1,3-Dimethyl-8-piperazin-1-yl-7-(2-trifluoromethylbenzyl) -3,7-dihydropurine-2,6-dione,  
1,3-Dimethyl-7-naphthalen-1-ylmethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
1,3-Dimethyl-7-naphthalen-2-ylmethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
7-(3-Bromobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
7-Benzyl-8-(3-isopropylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,  
7-Benzyl-8-[1,4]diazepan-1-yl-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,  
1,3-Dimethyl-7-(2-oxo-2-pyrrolidin-1-yl-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
2-(8-[1,4]Diazepan-1-yl-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl) - benzonitrile,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,  
7-(2-Difluoromethoxy-benzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
7-(2,3-Dimethoxy-benzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and  
1,3-Dimethyl-8-piperazin-1-yl-7-(2-trifluoromethoxy-benzyl) -3,7-dihydro-purine-2,6-dione.

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4. (Previously presented) A compound according to claim 1 selected from the following:

1,3-Dimethyl-8-piperazin-1-yl-7-(2-trifluoromethylsulfanyl-benzyl) -3,7-dihydro-purine-2,6-dione,

4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydro-purin-7-yl) -butyronitrile,

(R) -7-Benzyl-8-(3-isopropylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,

(S) -7-Benzyl-8-(3-isopropylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,

7-Benzyl-8-(6,9-diazaspiro[4.5]dec-9-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,

7-Benzyl-8-(piperazin-3-spiro-3'-bicyclo[2,2,1]heptane-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,

8-[1,4]Diazepan-1-yl-7-(2-methoxy-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-naphthalen-1-ylmethyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-7-(2-fluoro-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-methyl-benzyl) -3,7-dihydro-purine-2,6-dione,

7-(2-Chloro-benzyl) -8-[1,4]diazepan-1-yl-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

7-(2-Bromo-benzyl) -8-[1,4]diazepan-1-yl-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-trifluoromethyl-benzyl) -3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-nitro-benzyl) -3,7-dihydro-purine-2,6-dione,

3-Benzyl-8-piperazin-1-yl-7-(2-trifluoromethyl-benzyl) -3,7-dihydro-purine-2,6-dione,

3,7-Dibenzyl-1-(2-hydroxy-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,

3-Benzyl-7-phenethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,

3,7-Dibenzyl-8-[1,4]diazepan-1-yl-3,7-dihydro-purine-2,6-dione, and

7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione.

5. (Previously presented) A compound according to claim 1 selected from the following:

3,7-Dibenzyl-8-[1,4]diazepan-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,

3,7-Dibenzyl-8-[1,4]diazepan-1-yl-1-(2-hydroxy-ethyl) -3,7-dihydro-purine-2,6-dione,

2-(3,7-Dibenzyl-8-[1,4]diazepan-1-yl-2,6-dioxo-2,3,6,7-tetrahydro-purin-1-yl) -N,N-diethyl-acetamide,

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1,3,7-Tribenzyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
1,3,7-Tribenzyl-8-[1,4]diazepan-1-yl-3,7-dihydro-purine-2,6-dione,  
(S)-7-Benzyl-8-(3-benzyloxymethylpiperazin-1-yl)-1,3-dimethyl-3,7-dihydropurine-2,6-dione,  
3,7-Dibenzyl-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,  
3,7-Dibenzyl-8-[1,4]diazepan-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,  
3,7-Dibenzyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3,7-Dibenzyl-8-[1,4]diazepan-1-yl-3,7-dihydro-purine-2,6-dione,  
2-(3-Benzyl-2,6-dioxo-8-piperazin-1-yl-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,  
2-(3-Benzyl-8-[1,4]diazepan-1-yl-2,6-dioxo-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,  
2-(3-Benzyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,  
2-(3-Benzyl-8-[1,4]diazepan-1-yl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,  
3-Benzyl-7-(2-iodo-benzyl)-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,  
3-Benzyl-8-[1,4]diazepan-1-yl-7-(2-iodo-benzyl)-1-propyl-3,7-dihydro-purine-2,6-dione,  
3-Benzyl-7-(2-iodo-benzyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
3-Benzyl-8-[1,4]diazepan-1-yl-7-(2-iodo-benzyl)-3,7-dihydro-purine-2,6-dione,  
7-Benzyl-3-methyl-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,  
7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-propyl-3,7-dihydro-purine-2,6-dione, and  
7-Benzyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.

6. (Previously presented) A compound according to claim 1 selected from the following:

7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,  
2-(3-Methyl-2,6-dioxo-8-piperazin-1-yl-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,  
2-(8-[1,4]Diazepan-1-yl-3-methyl-2,6-dioxo-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,



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2-(8-[1,4]Diazepan-1-yl-3-methyl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl) – benzonitrile,  
7-(2-Iodo-benzyl) -3-methyl-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -3-methyl-1-propyl-3,7-dihydro-purine-2,6-dione,  
7-(2-Iodo-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -3-methyl-3,7-dihydro-purine-2,6-dione,  
3-Benzyl-8-[1,4]diazepan-1-yl-1-(3-hydroxy-propyl) -7-(2-iodo-benzyl) -3,7-dihydro-purine-2,6-dione,  
3-Benzyl-8-[1,4]diazepan-1-yl-1-(2-ethoxy-ethyl) -7-(2-iodo-benzyl) -3,7-dihydro-purine-2,6-dione,  
7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(3-phenyl-allyl) -3,7-dihydro-purine-2,6-dione,  
7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(2-oxo-2-phenyl-ethyl) -3,7-dihydro-purine-2,6-dione,  
2-(7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-2,6-dioxo-2,3,6,7-tetrahydro-purin-1-ylmethyl) – benzonitrile,  
(7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-2,6-dioxo-2,3,6,7-tetrahydro-purin-1-yl) – acetonitrile,  
3-Methyl-7-(2-methyl-thiazol-4-ylmethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-3-methyl-7-(2-methyl-thiazol-4-ylmethyl) -3,7-dihydro-purine-2,6-dione,  
3-Methyl-7-(2-oxo-2-phenyl-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-3-methyl-7-(2-oxo-2-phenyl-ethyl) -3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-3-methyl-7-phenethyl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-1-(3-hydroxy-propyl) -7-(2-iodo-benzyl) -3-methyl-3,7-dihydro-purine-2,6-dione, and  
1-(3-Hydroxy-propyl) -7-(2-iodo-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.

7. (Previously presented) A compound according to claim 1 selected from the following:

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8-[1,4]Diazepan-1-yl-1-(2-ethoxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
1-(2-Ethoxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(2-phenoxy-ethyl)-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-1-[2-(2-methoxy-ethoxy)-ethyl]-3-methyl-3,7-dihydro-purine-2,6-dione,  
7-(2-Iodo-benzyl)-1-[2-(2-methoxy-ethoxy)-ethyl]-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-1-(3,5-dimethoxy-benzyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-1-(3-methoxy-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
7-Biphenyl-2-ylmethyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,  
7-(2-Bromo-benzyl)-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,  
7-(2-Chloro-benzyl)-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,  
7-Benzyl-8-(3,5-dimethyl-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,  
7-(4-Methoxybenzyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-yl)-phenylacetic acid methyl ester,  
7-(5-Chloro-2-nitrobenzyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzonitrile,  
7-(4-Methanesulfonylbenzyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
7-(2-Fluoro-6-nitrobenzyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
7-(4-Benzoyloxybenzyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
7-(2,4-Dichlorobenzyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,  
1,3-Dimethyl-8-piperazin-1-yl-7-(4-trifluoromethylbenzyl)-3,7-dihydropurine-2,6-dione, and  
7-Biphenyl-4-ylmethyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione.

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8. (Previously presented) A compound according to claim 1 selected from the following:
- 3-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzoic acid methyl ester,
- 4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzoic acid methyl ester,
- 7-Biphenyl-2-ylmethyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(4-tert-Butylbenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1,3-Dimethyl-8-piperazin-1-yl-7-(4-trifluoromethoxybenzyl) -3,7-dihydropurine-2,6-dione,
- 7-(3,4-Dichlorobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1,3-Dimethyl-8-piperazin-1-yl-7-(4-[1,2,3]thiadiazol-4-ylbenzyl) -3,7-dihydropurine-2,6-dione,
- 4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) -3-methoxybenzoic acid methyl ester,
- 7-Cyclohexylmethyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-(2,5-diaza-bicyclo[2.2.1]hept-2-yl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 8-(6-Benzyl-[1,4]diazepan-1-yl) -7-(2-iodo-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- (S) -7-Benzyl-8-(3-hydroxymethylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-oxo-2-pyrrolidin-1-yl-ethyl) -3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl)-1,3-dimethyl-8-(6-pyridin-2-ylmethyl-[1,4]diazepan-1-yl)-3,7-dihydro-purine-2,6-dione,
- 7-(2-Bromo-benzyl)-1,3-dimethyl-8-(6-pyridin-2-ylmethyl-[1,4]diazepan-1-yl)-3,7-dihydro-purine-2,6-dione,
- (S) 7-Benzyl-8-(3-benzyl-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-1,3-dimethyl-8-(3-phenethyl-piperazin-1-yl)-3,7-dihydro-purine-2,6-dione,
- (R)-7-Benzyl-8-(3-benzylpiperazin-1-yl)-1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(3-(2-hydroxy-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione, and
- 7-Benzyl-8-(3-(2-methoxy-benzyl)-piperazin-1-yl)1,3-dimethyl-3,7-dihydro-purine-2,6-dione.

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9. (Previously presented) A compound according to claim 1 selected from the following:

(R)-7-Benzyl-8-(3-(4-methoxy-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

(R)-7-Benzyl-8-(3-(4-hydroxy-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

(R)-7-Benzyl-1,3-dimethyl-8-(3-(4-nitro-benzyl)-piperazin-1-yl)-3,7-dihydro-purine-2,6-dione,

(R)-7-Benzyl-8-(3-(4-fluoro-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,

(R)-4-(4-(7-Benzyl-1,3-dimethyl-2,6-dioxo-2,3,6,7-tetrahydro-1H-purin-8-yl)-piperazin-2-ylmethyl)-benzonitrile,

(R)-6-(8-(3-Benzyl-piperazin-1-yl)-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl)-nicotinonitrile,

(R)-7-Benzyl-1,3-dimethyl-8-(3-thiazol-4-ylmethyl-piperazin-1-yl)-3,7-dihydro-purine-2,6-dione,

(R)-2-[1,3-Dimethyl-2,6-dioxo-8-(3-thiophen-2-ylmethyl-piperazin-1-yl)-1,2,3,6-tetrahydro-purin-7-ylmethyl]-benzonitrile,

7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(tetrahydro-furan-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,

7-Benzyl-1-(2-cyclohexyl-ethyl)-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,

7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(5-methyl-hexyl)-3,7-dihydro-purine-2,6-dione,

7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(3-methyl-butyl)-3,7-dihydro-purine-2,6-dione,

7-Benzyl-8-[1,4]diazepan-1-yl-1-(2-ethoxy-ethyl)-3-methyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(tetrahydro-furan-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,

7-(2-Iodo-benzyl)-3-methyl-8-piperazin-1-yl-1-(tetrahydro-furan-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(tetrahydro-pyran-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,

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7-(2-Iodo-benzyl)-3-methyl-8-piperazin-1-yl-1-(tetrahydro-pyran-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,

7-(2-Iodo-benzyl)-3-methyl-1-(2-phenoxy-ethyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and

8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-1-(2-methoxy-ethyl)-3-methyl-3,7-dihydro-purine-2,6-dione.

10. (Previously presented) A compound according to claim 1 selected from the following:

7-(2-Iodo-benzyl)-1-(2-methoxy-ethyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,

1-(2-Benzyloxy-ethyl)-8-[1,4]diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,

1-(2-Benzyloxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,

1-(3,5-Dimethoxy-benzyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,

7-(2-Iodo-benzyl)-1-(3-methoxy-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(3-trifluoromethoxy-benzyl)-3,7-dihydro-purine-2,6-dione,

7-(2-Iodo-benzyl)-3-methyl-8-piperazin-1-yl-1-(3-trifluoromethoxy-benzyl)-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1-(2-hydroxy-propyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1-(2,2-diethoxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1-(2,2-dimethoxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,

8-[1,4]Diazepan-1-yl-1-(2-[1,3]dioxolan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,

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1-(2-[1,3]Dioxolan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
1-[1,3]Dioxolan-2-ylmethyl-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-1-(2-[1,3]dioxan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
1-(2-[1,3]Dioxan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-1-(2,3-dihydroxy-propyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
1-(2,3-Dihydroxy-propyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-1-(3-hydroxy-2-methyl-propyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
1-(3-Hydroxy-2-methyl-propyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-[3-(tetrahydro-pyran-2-yloxy)-propyl]-3,7-dihydro-purine-2,6-dione,  
8-[1,4]Diazepan-1-yl-1-(2-fluoro-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
7-Benzyl-8-[1,4]diazepan-1-yl-1-(3-hydroxy-propyl)-3-methyl-3,7-dihydro-purine-2,6-dione,  
and  
7-Biphenyl-2-ylmethyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione.